



Docket No.: 7374

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**APPLICANT:** O'Donnell et al.                      **GROUP:** 3752  
**SERIAL NO:** 10/800,796                      **EXAMINER:** Patrick Brinson  
**FILED:** March 15, 2004  
**FOR:** ROPE AND WEBBING PROTECTOR

Mail Stop: Amendment  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**DECLARATION OF RICHARD F. GROSSMAN**

1. I, Richard F. Grossman, of 1013 Orient Ave, Wilmington, DE, hereby declare as follows:
2. I have more than 35 years of experience in developing rubber and plastics formulations for various industrial and commercial applications. I have worked as a research chemist and gained extensive experience in compounding rubber and plastic compositions, including butyl, neoprene, SBR, XLPE and PVC. I have become very familiar with molding as well as extrusion of a variety of materials, including rubber and rubber compounds. A copy of my *curriculum vitae* is attached hereto as Exhibit A.
3. I received an A.B. degree in physical chemistry from Cornell University in 1955, an A.M. degree in Chemistry from Harvard University in 1956, and a Ph.D. in physical

chemistry from Purdue University in 1962. In addition, I have authored numerous publications and have been issued more than 60 U.S. Patents. I am editor of The Mixing of Rubber, Chapman & Hall, and wrote several chapters. I was co-editor of Vol. 4, Encyclopedia of PVC. I have written chapters on antistatic agents, lubricants, stabilizers, miscellaneous additives, powder molding, factory operations, and post-finishing processes for several textbooks. In addition, I have lectured on formulating and mixing rubber and PVC. I am a Fellow of the Society of Plastics Engineers, past Chairman of the New York Rubber Group, and Chairman-Elect of the Philadelphia Rubber Group. A more complete list of my publications and patents is provided in Exhibit A.

4. I have reviewed U.S. Patent No. 1,435,311 (to Knight) The Knight reference discloses a "tubular jacket" that may be applied to a telephone cord or other electrical wiring, or to a collapsed discharge pipe of a syringe (page 1, line 105 - page 2, line 10). The Knight reference states that the device's "inherent coiling or rolling action renders it possible to apply the jacket to cores of widely different sizes" (page 2, lines 11 - 13).
5. The Knight reference, however, states (at page 1, lines 68 - 78) that the device is:  
  
constructed of rubber or rubber-compound, or other suitable material molded or otherwise formed into substantially tubular shape and split longitudinally as at 10, its edges 11 being so constructed that they possess a strong inwardly-rolling or curling tendency, as illustrated in Figure 1, to normally reduce the size of the tubing so that the same will accommodate itself to fit and grip cores of different diameters.
6. Based on my education and experience in the field, such a material that is formed as disclosed in the Knight reference would not achieve the "inherent coiling or rolling

action" as stated in the Knight reference (page 2, lines 11 - 13). This is true of tubular rubber or rubber compound materials that exist today and those that existed in 1921.

7. When a tubular rubber or rubber compound material is split as disclosed in the Knight reference, it would largely maintain its shape, even with the longitudinal split. This is because no forces have been introduced to the device to cause the material to coil.

8. When a tubular rubber or rubber compound material is split as disclosed in the Knight reference, therefore, it would not have a plurality of overlapping wraps around an elongated element within the device such that there will exist sufficient overlap to completely envelope and protect the elongated element within the device from abrasion damage when a force greater than the constricting force caused by sliding actions opens an edge of an outer overlapping wrap.

9. As a result of this, a tubular rubber or rubber compound material that is split as disclosed in the Knight reference will not have a memory that produces a small constricting force that provides a snug fit around an elongated element of any diameter along the full length of the device with sufficient gripping force as to inhibit slippage along the length of the elongated element when no external force is applied to the protector, yet that will resist being unwrapped when slid sideways along a rough, hard surface in a direction transverse to the length of the device.

10. It is not at all clear to me how one might possibly modify the teachings of the Knight reference, which uses a molded or otherwise formed tubular rubber or rubber compound, to provide a device that has a memory to produce the constricting force discussed above in paragraph 9.

11. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements and the like may jeopardize the validity of the application or document or any registration resulting therefrom, and I further declare that all statements made of my knowledge are true and that all statements made on information and belief are believed to be true.

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Date: February 8, 2006

Richard F. Grossman

Richard F. Grossman

1013 Orient Ave  
Wilmington, DE 19807

# EXHIBIT A

## **DR RICHARD F. GROSSMAN**

### ***CURRICULUM VITEA***

#### **Education:**

1955: AB with Honors in Chemistry, Cornell, Phi Beta Kappa, thesis on Cyclization Reactions of  $\beta$ -methylheptenone published

1956: AM in Chemistry, Harvard, Sigma Xi, thesis on infrared spectra of molecular addition compounds published.

1962: PhD Physical Chemistry, Purdue, jointly with Univ. of Chicago, thesis adviser M.J.S. Dewar, computer programs for molecular orbital calculations, spectral properties of heterocycles,

#### **Employment:**

2003 - present: Consultant for Halstab, a supplier of lubricants and stabilizers for rubber and plastics.

1995-2003: Technical Director, Halstab, a supplier of lubricants and stabilizers for rubber and plastics.

1984-1995 Technical Director, Synthetic Products Co, then VP R&D. Supplier of stearates, lubricants and stabilizers for rubber and plastics. I became Vice President of Research & Development. In 1995 Synthetic Products was dissolved, whereupon I joined Halstab, a supplier of lubricants and stabilizers, as Technical Director. After retirement in 2003, I continued at Halstab as a consultant.

1982-1984 Technical Service Manager, Montedison USA, for EPDM, peroxides, fluoroelastomers and related products. Montedison USA was a supplier of synthetic rubber, organic peroxides, and fluoroelastomers. I provided technical service on Algoflon FKM, Fomblin, and PTFE to rubber and plastics industry. I set up several injection molding machines at customer locations and trade shows and personally molded many articles and investigated mold release systems for synthetic rubber and for fluoroelastomers.

1978-1982 Polymer Services became part of Polysar, Inc. , a major supplier of synthetic elastomers. I was appointed Senior Technical Advisor for Polysar, acting as the technical liaison between Polysar's elastomer sales and custom

compounding divisions. While at Polysar, I was a member of the business team that led to the acquisition of the BF Goodrich EPDM facility, and visited customers worldwide in this capacity.

1971-1978 Technical Director, Polymer Services, compounder of rubber and plastics. As technical director of Polymer Services, I was responsible for developing a large number of recipes for compounds, including natural rubber, general and special purpose synthetic rubber. Many of these were for extrusion applications. In this capacity, I visited customers engaged in extrusion of tubing, hose and insulated wire and provided technical service.

1968-1971 Research Director, Cooke Color & Chemical Co. Responsible for testing, product development, and technical service. At the time, the largest custom mixer of rubber and plastic compositions in the US; 11 mixing lines running rubber, PE, PVC, styrenics. Developed the first commercial radiation crosslinkable wire insulation compounds.

1963-1968 Group Leader, New Products, Norton Co. Led R&D group which filed 30+ patents relating to adhesive and release coatings for pressure sensitive tapes and coated abrasives. These include US 3,508,949 on new release agents for aggressive silicone-based adhesives. Member of Norton corporate R&D board.

1962 to 1963: I was physical chemistry instructor at the University of Chicago. Next, from 1963 to 1967 I was group leader for new products at Norton Co., and was responsible for the compounding of pressure sensitive adhesives and release coatings for adhesive tapes. From 1967 to 1971 I was the research director for Cooke, Color & Chemical Co., where I supervised the compounding, mixing and testing of ten Banbury mixing lines, including EPDM, neoprene, NBR/PVC, PVC, SBR and XLPE compositions.

1957-1961: Chemist, Anaconda Wire & Cable Co. Compounded PVC, PE, Neoprene butyl and SBR. 2 patents, several publications. Familiar with mixing and testing of rubber and plastic compositions. Developed components for the Distant Early Warning Line and for missile ignition cables.

1956-1957: Technical writing and editing (US Army). Commissioned June 1955, now in Inactive Reserve.

### **Memberships and Contributions:**

Fellow of the Society of Plastics Engineers; past chairman of the Vinyl and the Polymer Additives and Modifiers Divisions.

Author of chapters:

Use of Specialty Elastomers in Thermoset Polyester Compositions in K. Riew, Rubber-Toughened Plastics, ACS Publications.

Lubricants in J. Lutz, Thermoplastic Polymer Additives, Marcel Dekker.

Antistatic Agents, Dispersions, Reactive Monomers, Organic Peroxides, Dispersion Aids, Coupling Agents, Scavengers, and Internal Release Agents in J. Edenbaum, Polymer Modifier & Additives Handbook.

Lubricants, Antistatic Agents, Nonlead Stabilizers in E.J. Wickson, Handbook of PVC Formulating, John Wiley.

Editor:

The Mixing of Rubber, Chapman & Hall, and chapters on mixing procedures.

With J. Lutz, Polymer Modifiers and Additives, Marcel Dekker.

With L. Nass, Vol. 4, Encyclopedia of PVC, Marcel Dekker

2<sup>nd</sup> Edition, Handbook of PVC Formulating, John Wiley, now in progress.

Lectured on:

Mixing of rubber; Testing; Vulcanization; Rubber Compounding; Molding; Lubricants; Stabilizers and Antioxidants.

### **Recent patents:**

US 6,475,522 Synthetic polymer compositions containing antibiotics as antioxidants.

US 6,376,693 + 6,215,010 Synthesis of organotin oxides

US 6,140,403 Coated acid absorber costabilizers for polymers

US 6,077,882 (Subdivision of above)

US 5,561,182 Heat Stabilization of PVC

US 5,475,045 Reduction of extractable heavy metals

US 5,439,742 Electrical insulting compositions

US 5,352,723 Compositions containing hydrotalcites

US 5,162,557 Ruthenium aromatic carboxylates

US 5,047,458 Melamine-based flame retardants

US 5,083,235 Method of making capacitors

US 4,963,127 Stannic terephthalate

Applied for – Additives to promote biodegradation of PVC



**Recent publications:**

Combustion Products of Lead Stabilizers, J Vinyl & Additive Tech (JVAT) 6, 138 (2000); JVAT 7,65 (2001)  
New Class of Antioxidants, JVAT 7, 24 (2001)  
Service Life of Rubber Heating Hose, Rubber World, July 2000  
Acid Absorbers as Costabilizers, JVAT 6, 4 (2000)  
Structure of Lead Stabilizers, JVAT 3, 8 (1997); 4, 179 (1998); 4, 182 (1998)  
Low Extractable Lead Stabilizers, JVAT 5, 37 (1999)  
UV Light Resistance of Vinyl Miniblinds, JVAT 3, 279 (1997); 4, 214 (1998)  
NMR Spectra of Lead Stabilizers, JVAT 5, 148 (1999)  
Reactions of Stabilizers, JVAT 3, 5 (1997)  
Lead Stabilizer Alternatives, JVAT 1, 1 (1995)  
Mixed Metal Stabilizer Synergism, JVT 12, 34 (1990); 12, 142 (1990); 14, 11 (1992); 15, 22 (1993); 15, 25 (1993); JVAT 1, 227 (1995)

**Expert Witness history:**

1997 Rochell Ewaskin v Zellers, Inc. et al, General Division Ontario Court. Expert witness for Hudson Bay Co. (Zellers). Expert reports and deposition. Case against Hudson Bay dismissed.

1999 Goodyear Tire v Heatway. Expert witness for US District Court in Northern Ohio. Developed method for product remediation in the field; expert report.

2000 Albert V. Gore et al v George W. Bush et al, Tallahassee. Deposition and trial testimony.

2001 O'Callaghan v Baerlocher USA, Aberdeen, MS. Expert witness for Baerlocher USA. Expert report and hearing testimony. Case settled favorably to Baerlocher.

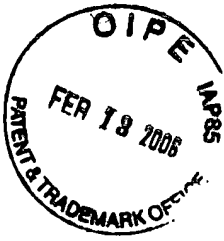
2003 Northrop Grumman v US Navy. Expert witness for Northrop Grumman. Expert reports, deposition and hearing testimony. Northrop Grumman victorious.

2004—present: Richards Mfg. v Thomas & Betts. Expert witness for Richards Mfg. Expert reports and deposition.

2004 Kracor v WEMA, Blue Ridge, Biltrite Corp. Expert witness for Biltrite Corp. Expert report. Case settled favorably to Biltrite.

2004 McGee v Kidd. Expert report and deposition, case settled favorably.

2005 Edwards v Rockwell. Expert witness for Hudson Bay Mining Co.



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Alexandria, Virginia 22313-1450

COPY

**DECLARATION OF MARK G. O'DONNELL**

1. I, Mark G. O'Donnell, of 30 Arbor Road, S. Burlington, Vermont, hereby declare as follows:
2. I am a co-inventor of the subject matter disclosed and claimed in the present application.
3. I am the V.P., Sales & Marketing of Trach Mate, Inc., the assignee of all right, title and interest in the above referenced application, all inventions disclosed therein, and any and all patents that issue therefrom.
4. I am responsible for all marketing and sales activities of Trach Mate, Inc.

5. Trach Mate, Inc. markets and sells a product called the SPIROLL® brand rope protector, a copy of a brochure of which is attached hereto as Exhibit A.

6. The SPIROLL® brand rope protector was initially introduced to the climbing market in about the fall of 2003, and was introduced to professional safety markets in about the spring of 2004. Prior to the introduction of the SPIROLL® brand rope protector, ropes were either unprotected at stress or abrasion points, or were protected by complex enclosing protectors that fastened with, for example, velcro or clips, or were simply protected by placing a jacket or climbing pack under the rope at the abrasion point.

7. For example, one review of the SPIROLL® brand rope protector in Gear Trends Specialty News (SNEWS) in September 2003 stated "Protecting ropes from abrasion or cutting has generally been a nuisance requiring either padding the rock or attaching a sleeve to the rope". The SPIROLL® brand rope protector provides sufficient protection through the use of multiple wraps while holding itself in place without the need for clips or tie-offs.

8. The Spiroll Rope Protector does not require a fastener or clip to hold itself in place on a rope. The inside diameter of the spiroll configuration is initially smaller than the rope diameter. When wrapped around the rope, it tries to return to its original inside diameter and in the process snugs down on the rope thus holding itself in place in whatever location it is placed.

9. I have been the primary person at Trach Mate, Inc. that is responsible for sales since November 2003, and have attended three trade shows throughout the country since that time.

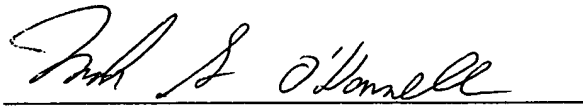
10. Although protectors had existed in the market prior to introduction of the SPIROLL® brand rope protector, the SPIROLL® brand rope protector, because of its unique features described above, has been met with significant and surprising commercial interest from a wide variety of groups, such as sport rock climbing and professional rescue.

11. To date, Trach Mate, Inc. has sold over 1500 SPIROLL® brand rope protectors, and it is my experience from discussions with customers that the strong commercial interest in the SPIROLL® brand rope protector is due to the product being able to be easily applied to and positioned on a rope (without requiring a fixed attachment), yet provide sufficient protection through the use of wrapping the protector around the rope with sufficient overlap to provide an underlying abrasion resistant surface under the exposed abrasion resistant outer surface.

12. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements and the like may jeopardize the validity of the application or document or any registration resulting therefrom, and I further declare that all statements made of my knowledge are true and that all statements made on information and belief are believed to be true.

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Date: January 27, 2005



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Mark O'Donnell

30 Arbor Road  
S. Burlington, VT 06738